REMARKS

This Amendment is in response to Examiner's Office Communication of April 27, 2006. Claims 1-22 have been amended. Claims 1-22 are now pending.

In the Office Communication the Examiner states that Applicant's Amendment filed on January 11, 2006 is not fully responsive to the prior office action mailed July 11, 2005 because the amended claims were drawn to a non-elected invention (MPEP §821.03).

In response Applicant amends claims 1-22 to be directed to "a library of nucleic acid constructs", an invention as originally elected. Withdrawal of this ground of rejection is therefore respectfully requested.

Independent claim 1 as amended recites:

> **A library of nucleic acid constructs transfected into a cell sample,** each construct comprising:
>
> a cis element sequence comprising one or more copies of a cis element to which a transcription factor is known to bind, the **cis element sequence varying within the library of nucleic acid constructs**;
>
> a promoter sequence 3' relative to the cis element sequence; and
>
> a reporter sequence 3' relative to the promoter sequence, **the reporter sequence comprising a variable sequence that varies within the library of nucleic acid constructs**;
>
> wherein each cis element sequence corresponds to a given reporter sequence within the library of nucleic acid constructs, and **the reporter sequences are transcribed in the cell sample as mRNA** when a transcription factor binds to the cis element and induces expression.

Support for the amended claim language appears in the Specification, for example, at page 19, lines 28-31.

I. Rejection Under 35 U.S.C. §103(a) in View of Kauffmann et al. and Morris et al.

Claims 1-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kauffmann et al. (WO 00/04196) and Morris et al. (U.S. Patent No. 6,458,530).

Independent claim 1 as amended specifies **a library of nucleic acid constructs transfected into a cell sample,** each of the construct comprising i) a cis element sequence comprising one or more copies of a **cis element** to which a transcription factor is known to bind, the cis element sequence varying within the library of nucleic acid constructs; ii) a promoter sequence 3' relative to the cis element sequence; and iii) a **reporter sequence** that is 3' relative to the promoter sequence and comprises **a variable sequence** that varies within the library of nucleic acid constructs. The cis element in each construct corresponds to a given reporter sequence within the library of nucleic acid constructs; and the reporter sequences are transcribed in the cell sample as mRNA when a transcription factor binds to the cis element and induces expression.

As discussed during the interview, Kauffmann et al. fails to teach a library of nucleic acid construct each of which comprises one or more copies of a cis element to which a transcription factor is already known to bind; and a reporter sequence 3' relative to the promoter sequence and varies within the library. The secondary reference Morris et al. fails to supply the claim limitations missing in Kauffmann et al. Morris et al. discloses methods of selecting tag nucleic acids and VLSIPS™ arrays. *See* Abstract. Nowhere does Morris et al. teach or suggest a library of nucleic acid constructs transfected into a cell sample with **variable cis elements and variable reporter sequences**.

There is not motivation to combine the teaching of Kauffmann et al. and Morris et al. to arrive at the present invention. Kauffmann et al. teaches a method for identifying **new** cis elements from a diverse library of nucleic acid candidates. If a library of nucleic acid constructs each of which comprises one or more copies of a cis element to which a transcription factor is **already known** to bind, Kauffmann's purpose of finding new cis elements would have been defeated. In addition, Morris et al. focused on selecting tag nucleic acids that "have uniform hybridization characteristics (i.e., similar thermal binding stability to complementary nucleic acids), making the tag sets suitable for detection by VLSIPS™ and other probe arrays, such as Southern or northern blots." See Summary of Invention; column 12, lines 65-67 and column 13, lines 1-2. Thus, linking **a variable cis element** to **a variable tag nucleic acid** would not only render the method inoperable due to complication of **dual variables**, but also defeat the purpose

of selecting tags with desirable characteristics. In view of these disadvantages, one of ordinary skill in the art would not be motivated to modify Kauffmann et al. in view of Morris et al. or vice versa to arrive at the claimed invention.

In view of the failure of Kauffmann et al. and Morris et al. to teach or suggest the claimed invention, Applicants submit that a prima facie case of obviousness has not been established under 35 U.S.C. §103(a). Withdrawal of this ground of rejection is therefore respectfully requested.

II. Rejection Under 35 U.S.C. §103(a) in View of Li et al. and Morris et al.

Claims 1-22 stand rejected under35 U.S.C. §103(a) as being unpatentable over Li et al. (WO 00/34435) and Morris et al. (U.S. Pat. No. 6,458,530).

As discussed during the interview, Li et al. fails teach or suggest a library of nucleic acid constructs which are transfected into a cell sample and have variable cis elements and variable reporter sequences. In contrast, Li et al. discloses individual constructs containing a cis element and a **fixed** reporter gene such as the secreted alkaline phosphatase (SEAP), and transfecting a cell sample (e.g., HEK 293 cells) with each of the constructs **individually**. The activity of the single reporter SEAP was measured for the individual cell samples. See Examples 1-8. Thus, the cell sample in Li et al. contains only a single construct with a cis element and a reporter gene. On the other hand, Morris et al. focused on selecting tag nucleic acids that "have uniform hybridization characteristics making the tag sets suitable for detection by VLSIPS™ and other probe arrays. Nowhere does Morris et al. teach or suggest a library of nucleic acid constructs transfected into a sample and having **both variable cis elements and variable reporter sequences**.

The assays in Li et al. were used for "establishing a functional status profile of transcription factors for evaluating any biological differences in vivo, such as normal cells versus differentiated, apoptotic, and cancer cells." Page 17, lines 20-23. To compare the functional status of transcription factors in a cell sample such as HEK 293 cells, the reporter gene should be fixed. Linking **a variable cis element** to **a variable reporter gene** (e.g., the SEAP gene changed to a luciferase gene) would only render the samples incomparable because of the

differences in biochemical properties of the reporter proteins. In view of these disadvantages, one of ordinary skill in the art would not be motivated to modify Li et al. in view of Morris et al. to arrive at the claimed invention.

In view of the failure of Li et al. and Morris et al. to teach or suggest the claimed invention, Applicants submit that a prima facie case of obviousness has not been established under 35 U.S.C. §103(a). Withdrawal of this ground of rejection is therefore respectfully requested.

CONCLUSION

In light of the remarks and arguments set forth above, Applicants earnestly believe that they are entitled to a letters patent, and respectfully solicit the Examiner to expedite prosecution of this patent application to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

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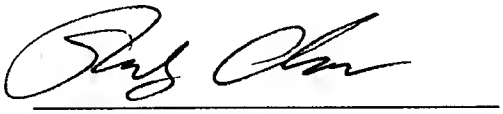
Respectfully submitted,

Date: May 22, 2006 By: 

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